

## Monday: 10/22/01

03:49:04 **bi5-tq4** trip on quench indication. Brought on via Wing's script (comment by...trav -- **bi5-tq4** tripped and hit everyone's ZDC rates. By the end of the picture the supply is back up.)

05:41:04 comment by...trav -- **bi5-tq4** has tripped again and won't come back on. **bo3-qs** is also off and won't turn on. (10:45:00 during the day, Don replaced the Fiber Optic card)

09:45 RHIC store is ended. C. Schulties requests 30 min to load software for RHIC main supplies.

Summary, 10/22/01 QLI - Beam Abort, YELLOW 4b-time.A (Actual Time 09:51:08 +3091478 )

QPA Faults none

QD Alarms (4b-qd2) Y4IMONQ Tq -25

Postmortems y-qmain-ps shows high error signal before T=zero

Qdplots n/a

Quench Status NOT REAL

Reason Carl shutoff power to the regulator to load new software for the mains

Summary, 10/22/01 QLI - BLUE, 4b-time.A (Actual Time 09:53:28 +1595952)

QPA Faults none

QD Alarms (4b-qd1) B4IMONQ Tq= -25

Postmortems b-qmain p.s. shows a high error signal before T=zero

Qdplots n/a

Quench Status NOT REAL

Reason Carl shutoff power to the regulator to load new software for the mains.

10:30- **bi5-tq4** trips on a quench error. D. Bruno changed thr Fiber Optics card.

Summary, 10/22/01 QLI -Beam Abort, Yellow ring 11b-ps1 (Actual Time 18:37:28 +3796295)

QPA Faults none

QD Alarms (11b-qd1) Y10DSA5\_A4VT Tq= -23 {many others(4) had - Tq's}

Postmortems show a glitch on y-dmian p.s.

Qdplots Yellow Main Dipole P.S. Glitch

Quench Status

Reason occurred during the down ramp, before the injection current was reached. A number of the quench detectors in the arc regions tripped before the quench link was pulled.

Summary, 10/22/01 QLI - Blue ring, 4b-time.B (Actual Time 19:45:28 +3530462)

QPA Faults b4-dhx-qp CROW

QD Alarms no neg Tq's (@10:36:05 B5TQ4\_VT didn't clear from before)

Postmortems show blue main dipole oscillating

Qdplots Blue Main Dipole P.S. Glitch

Quench Status

Reason A blue quench link interlock occurred when the down ramp was issued. The main dipole flattop supply indicated an overcurrent on the output fault. (comment by...jak -- Error on blue main dipole flattop supply.) C. Schultheiss was contacted and saved data from the quench detector, before the links were recovered.

Summary, 10/22/01 QLI - Yellow ring, 9b-ps1 (Actual Time 19:49:44 +3638922)

QPA Faults bi9-dhx-qp CROW

QD Alarms (9b-qd1) Y8DSA5\_A4VT Tq= -24 (many others (7) with neg Tq's)

Postmortems show the y-dmain voltage jump up.

Qdplots Yellow Main Dipole p.s. glitch.

Quench Status

Reason yellow quench link interlock occurred originating from 9b-ps1 during the down ramp, before the injection current was reached. A number of the quench detectors in the arc regions tripped before the quench link was pulled

Summary, 10/22/01 QLI - Blue ring, 4b-time.B (Actual Time 21:47:12 +1865720)

QPA Faults b4-dhx-qp CROW

QD Alarms no neg Tq's

Postmortems show a glitch on y-dmain.

Qdplots Blue Main Dipole p.s. glitch

Quench Status

Reason blue quench link interlock occurred when the down ramp was issued. C. Schultheiss was contacted again. He reported that the dipole mains are switching between the flattop and ramp supplies before the link is pulled. He is going to investigate this further tomorrow during the day. He had us reboot cfe-4b-ps1 before the quench link was recovered.

NOTE: Regarding ESI faults for RHIC power supplies: ESI is a hook for a security system input that has not been instituted. The ESI indications are therefore false. If a Stby-Err is reported for a tq, go to the pet page and look at the faults to verify if the supply is really off. yi10-tq5 currently reports a standby error but it is on.

Summary, 10/22/01 QLI - Blue ring, 2b-ps1 (Actual Time 22:29:44 +682763)

QPA Faults none, blue off including tq's

QD Alarms B2DRDO\_DO Tq= 1514 (only one on the page)

Postmortems show all p.s. noisy near zero current.

Qdplots

Quench Status NOT REAL

Reason Operator error.

Summary, 10/22/01 QLI - Beam Abort, 12a-ps1.A Blue ring, 6b-ps1 (Actual Time 23:43:20 +1816825)

QPA Faults none, all off including tq's

QD Alarms no neg Tq's

Postmortems show all signals dropping close to T=0, mostly error signals going full.

Qdplots

Quench Status

Reason qpa faults, all qd1 in service building had no FEC105P-RTDL, chassis had to be rebooted.

Blue QLI after a reset of the rtdl fec. 2340: Several more fec's are reporting no heartbeat, one of which is the 4b-rtdl fec.

## **Tuesday: 10/23/01**

**00:58:53-** A reboot of the 4b-rtdl fec dropped the blue link and fired all the dx

heaters. QLI recovery awaits the heater return. Cryo reports no problems. G. Ganetis called in and is monitoring the situation from home.

0130: Running blue recovery script. The 'Permit Module Status' step hangs up. Ganetis reports that this should be addressed by controls during the day and has us skip the step.

Summary, 10/23/01 QLI - Beam Abort, Blue ring, 10a-ps3.A (Actual Time 01:57:36 +3476106)

QPA Faults none

QD Alarms none (RUNNING)

Postmortems many Iref and current signals spike after T=0, running near zero current

Qdplots

Quench Status

Reason bo10-qf2-ps error (bipolar 150amp p.s. contactor problem)

Summary, 10/23/01 QLI - Beam Abort, Blue ring, 10a-ps3.A (Actual Time 02:10:20 +758068)

QPA Faults none

QD Alarms none (RUNNING)

Postmortems bo10-qf2-ps has an error fault on turn on

Qdplots

Quench Status NOT REAL, power supply problem

Reason G. Ganetis informs that **bo10-qf2 is showing an error**; MCR tries the script one more time.

0230: Links are up. **yi10-tq5 is reporting an ESI error** and will not clear. We are contacting D. Bruno. Cause: Power Supply readback problems

Summary, 10/23/01 QLI - Beam Abort, Yellow ring, 7b-ps1 dropped first (Actual Time 03:31:12 +3527120)

QPA Faults none

QD Alarms (7b-qd1) Y6DSA5\_A4VT Tq= -23 (many others (6) also with -Tq's)

Postmortems (PIC)

Qdplots (PIC)

Quench Status NOT REAL

Reason Operator error, Yellow QLI at 7b-ps1 while running the down ramp. Several quench detectors tripped before the link was pulled. **Wrong slow factor from Injection to Park**

Summary, 10/23/01 QLI - Blue ring, 1b-ps1 dropped first (Actual Time 03:39:40 +1993978)

QPA Faults none, blue and yellow off

QD Alarms (1b-qd1) B1DSA3\_A2VT Tq= -24

Postmortems (PIC)

Qdplots (PIC)

Quench Status NOT REAL

Reason Operator error, Blue QLI at 1b-ps1 while at injection. We sent a stop command for the down ramp to prevent the rings from coming back up from park, but it ramped to injection anyway. We will have to run another hysteresis ramp after the recovery.

11:01:56 comment by...vp -- About 7A difference in b12-dhx magnet between today and yesterday ramps indicated by pscompare. In Yellow Barshow also shows y6-dh0 different by 1A on the ramps.

10:15 Beam was lost due to NM 264 interlock. Investigation of the power supplies showed that b12-dhx power supply has a current regulator fault. D. Bruno is looking into the problem.

11:15 D. Bruno pulled the card out and recycled the power to the supply. Blue QLI.

11:29:34 comment by...leif -- Don Bruno looking into this problem. Hopefully this explains the poor equilibrium orbits in both planes, and the losses that have resulted in Chipmunks on the last two ramps.

Summary, 10/23/01 QLI - Beam Abort, Blue ring, 12a-ps1.A. (Actual Time 11:24:40 +279260)

QPA Faults none

QD Alarms (12a-qd1) B12DRDX\_VT Tq= -23

Postmortems (PIC)

Qdplots (PIC)

Quench Status NOT REAL

Reason Current regulator problem, **b12-dhx-ps**

Summary, 10/23/01 QLI - Beam Abort, QLI Blue ring 10a-ps3.A (Actual Time 14:14:32 +1369020)

QPA Faults bi9-dhx-qp CROW

QD Alarms (10a-qd1) B10DRDO\_DO Tq= -22

Postmortems (PIC) P.S. Oscillating before T=0

Qdplots (PIC)

Quench Status NOT REAL

Reason Blue quench link interlock. **The voltage for the bo10-dhx supply dropped to zero** before the link was pulled. D. Bruno was contacted.

The scheduled RHIC power supply maintenance has commenced.

Summary, 10/23/01 QLI - Yellow ring, 4b-time.B dropped first (Actual Time 14:55:56 +919762)

QPA Faults b4-dhx-qp CROW

QD Alarms none (RUNNING)

Postmortems

Qdplots

Quench Status

Reason Carl working on the system

Work done during the Maintenance

- Replaced the yil0-tq5 supply
- Replaced the bol0-qf2 supply
- Replaced three cards for bol0-dhx (isolation amplifier card, buffer card, firing card)
- Replaced the current regulator card and the fiber optic interface card for b12-dhx
- Replaced the fiber optic interface card for bol2-qd7
- Carl updated the software for the yellow dipole supply and added monitoring instrumentation
- New software was downloaded to all of the quench detectors

Summary, 10/23/01 QLI - Beam Abort, Blue ring, 6b-ps1 (Actual Time 18:25:24 +1483263)

QPA Faults none, all off including tq's

QD Alarms no neg tq's

Postmortems N/A

Qdplots N/A

Quench Status NOT REAL

Reason The links had been recovered, but a blue quench link interlock occurred before a hysteresis cycle was attempted. D. Bruno and W. Louie are investigating. D. Bruno reported that he had to put back the original fiber optic card for bol0-dhx, and that W. Louie found a **loose connector for the bi5-tq4 QPA**.

1950 -- A hysteresis cycle has been completed. Power Supply personnel took data along the ramp and reported that the wfg and current values matched well. W. Louie is in the process of re-zeroing the quench detectors, since new software was downloaded today.

Summary, 10/23/01 QLI - Beam Abort, Yellow ring, 4b-time.A (Actual Time 19:59:24 +3766058)

QPA Faults none

QD Alarms none (RUNNING)

Postmortems N/A

Qdplots N/A

Quench Status NOT REAL

Reason Work being done on the zeroing of the quench detectors (Wing). Both quench links were pulled when the quench detectors were re-zeroed.

Summary, 10/23/01 QLI - Blue ring, 4b-time.A. (Actual Time 20:01:08 +1681970)

QPA Faults none

QD Alarms none (RUNNING)

Postmortems N/A

Qdplots N/A

Quench Status NOT REAL

Reason Work being done on the zeroing of the quench detectors (Wing). Both quench links were pulled when the quench detectors were re-zeroed.

Summary, 10/23/01 QLI - Beam Abort, Blue ring, 3b-ps1. (Actual Time 21:43:40 +2802155)

QPA Faults b4-dhx-qp CROW

QD Alarms (3b-qd1) B3DSA3\_A2VT Tq= -24

Postmortems nothing unusual

Qdplots (PIC) Show VT drop indication of a quench

Quench Status **REAL QUENCH**

Reason Blue quench link interlock originating from 3b-ps1. Cryo reported that a recoler was emptied.

**22:16:13-** Having a problem ramping yellow down. Roger Lee has been contacted. wfgRamp.9c-ps2.G1 error. Resetting the fec did not help. [jak](#) at **22:48:07-** Roger Lee removed a file that the wfg server looks at, in order for us to ramp. He placed everything back to the normal state, once the yellow supplies starting ramping to park.

Summary, 10/23/01 QLI - Yellow ring, 2b-ps1 dropped first (Actual Time 22:42:03)

QPA Faults b2-dhx-qp CROW

QD Alarms (2b-qd2) Y1QFQ2 \_VT Tq= -24

Postmortems all p.s. ramping

Qdplots (PIC) indicate Y1DMQ2 RAW sudden drop

Quench Status NOT REAL

Reason Operator error, a "here to park" instead of "here to injection" was accidentally sent.

Summary, 10/23/01 QLI - Beam Abort, Yellow ring 10a-ps3.A (Actual Time 23:07:40 +1167046)

QPA Faults yo9-qd7-qp with yo9-tq4,5 & 6 also CROW

QD Alarms Aux (9b-qd1) @ 22:59:37 YO9-SXD-VT

Postmortems show large error signals before T=0 on many

Qdplots N/A

Quench Status NOT REAL

Reason the wfgman had to be restarted. (see note below)

Summary, 10/23/01 QLI - Beam Abort, Yellow ring, 10a-ps3.A. (Actual Time 23:22:12 +1104195)

QPA Faults yo9-qd7-qp with yo9-tq4,5 & 6 also CROW

QD Alarms none (RUNNING)

Postmortems show large error signals before T=0 on many

Qdplots N/A

Quench Status NOT REAL

Reason the wfgman had to be restarted. (see note below)

*Note for two previous quenches ( 23:07:40 & 23:22:12)*

The Yellow links dropped at the end of the recovery script. After contacting G. Ganetis the 10 o'clock supplies are found to have large setpoints. Ramping heretozero with wfgman has no effect, but George can ramp them down using the pet pages. J. Van Zeits has us 'die' wfgman and restart. This fixes the problem and the setpoints go to zero. Running recovery script.

**23:24:40** comment by...jak -- Note that the **bi9-qgt ramp time is set to 20 and not 1**. I will set it to 1. (Operator error)

### **WEDNESDAY 10/24/01**

Summary, 10/24/01 QLI - Beam Abort, Yellow ring, 10a-ps3.A. (Actual Time 00:08:24 +481934)

QPA Faults none

QD Alarms no neg Tq's

Postmortems show yo9-qd1-ps Iref drops before T=zero

Qdplots show that power supply tripped

Quench Status NOT REAL

Reason

Summary, 10/24/01 QLI - Beam Abort, Blue ring, 10a-ps3.A. (Actual Time 03:36:00 +3891338)

QPA Faults none

QD Alarms (10a-qd1) B9DRDO \_DO Tq= -12

Postmortems show nothing unusual

Qdplots

Quench Status NOT REAL

Reason **bi9-dh0-ps** Blue QLI at 10a-ps3.A while filling the blue ring. 10a-qd1 tq value is negative. Postmortem data indicates a problem with bi9-dh0; the qpa for it also crowbarred. The current reference was 15 amps but the current was zero. psall indicated a DC overcurrent for the supply. Mode switch to protons. 0350: Running blue recovery script after turning off bi9-dh0.

Summary, 10/24/01 QLI - Beam Abort, Blue 10a-ps3.A. (Actual Time 05:13:36 +2504312)

QPA Faults bi9-dho-qp CROW

QD Alarms no neg Tq's

Postmortems

Qdplots

Quench Status NOT REAL

Reason **bi9-dh0-ps** caused quench

**Bi9-dho-ps** tripped on a DC overcurrent. D. Bruno is looking from home

Summary, 10/24/01 QLI - Beam Abort, Blue ring, 10a-ps3.A. (Actual Time 06:48:56 +2947172)

QPA Faults bi9-dho-qp CROW

QD Alarms none (RUNNING)

Postmortems

Qdplots

Quench Status NOT REAL

Reason **bi9-dh0-ps** caused quench

Summary, 10/24/01 QLI - Beam Abort, Blue ring, 10a-ps3.A. (Actual Time 07:23:52 +1981219)

QPA Faults none

QD Alarms (10a-qd1) B9DRDX \_VT Tq= 1586 (only one on the page)

Postmortems

Qdplots

Quench Status NOT REAL

Reason **bi9-dh0-ps** caused quench (comment by...fulvia -- Another quench caused by bi9-dh0 during the recovery scripts. An attempt of Sanjee to switch off bi9-dh0 (in order to be able to ramp at least yellow to injection) does not work. AT this point we all wait for Don Bruno to fix the problem.)

08:35:31- PS at injection now, **bi9-tq4** needs to be manually revived. [fulvia](#)

Summary, 10/24/01 QLI - Blue 10a-ps3.A. (Actual Time 08:57:48 +1093914)

QPA Faults none

QD Alarms no neg Tq's

Postmortems

Qdplots

Quench Status NOT REAL

Reason **bi9-dh0-ps** caused quench

Summary, 10/24/01 QLI - Blue 10a-ps3.A. (Actual Time 09:31:56 +3230380)

QPA Faults none

QD Alarms no neg Tq's

Postmortems show bi9-dho Iref drop -0.007 before T=zero

Qdplots

Quench Status NOT REAL

Reason **bi9-dh0-ps** caused quench

Summary, 10/24/01 QLI - Yellow 7b-ps1. (Actual Time 09:32:20 +3651611)

QPA Faults none

QD Alarms no neg Tq's

Postmortems

Qdplots show link dropped before T=zero

Quench Status NOT REAL

Reason power supply induced

Summary, 10/24/01 QLI - Blue 10a-ps3.A. (Actual Time 10:48:00 +2937370)

QPA Faults bi9-dho-qp CROW

QD Alarms (10a-qd1) B9DRD0\_DO Tq= -12

Postmortems show bi9-dho & bi9-dhx drops before T=zero

Qdplots show B9DRDO\_DO drop -2.6 before T=0

Quench Status NOT REAL

Reason **bi9-dh0-ps** caused quench D. Bruno replaced two voltage regulator cards and the firing card in has fixed the problem

Summary, 10/24/01 QLI - Yellow 7b-ps1. (Actual Time 12:48:28 +1541302)

QPA Faults none

QD Alarms (7b-qd1) Y6DSA4\_A3VT Tq= -23 (also many (5) others with -Tq's)

Postmortems at 1004B show p.s. ramp current & voltage drop before T=0

Qdplots verify Yellow Main P.S. Glitch

Quench Status NOT REAL

Reason **Yellow Main Dipole Power Supply Glitch**

Summary, 10/24/01 QLI - BLUE 4b-time.B (Actual Time 13:36:36 +533275)

QPA Faults none, blue & yellow off

QD Alarms none displayed (RUNNING)

Postmortems n/a

Qdplots n/a

Quench Status NOT REAL (p.s. induced)

Reason **Carl working on the main systems**

Summary, 10/24/01 QLI - BLUE 11b-ps1 (Actual Time 15:01:28 +3971717)

QPA Faults none

QD Alarms (11b-qd1) B10QFA3\_A2VT Tq -24 **\*\*note\*\*** this was the only one displayed on the page

Postmortems n/a

Qdplots n/a

Quench Status NOT REAL

Reason System being worked on.

Summary, 10/24/01 QLI - YELLOW, 11b-ps1 (Actual Time 15:11:36 +2051106)

QPA Faults none

QD Alarms none (dumping data was displayed)

Postmortems n/a

Qdplots n/a

Quench Status NOT REAL

Reason System being worked on.

Summary, 10/24/01 QLI - YELLOW, 4b-time.B (Actual Time 16:17:44 +3776561)

QPA Faults none

QD Alarms none (RUNNING)

Postmortems n/a

Qdplots n/a

Quench Status NOT REAL, power supply induced

Reason C. Schulties is making adjustments to Yellow power supply software.

Summary, 10/24/01 QLI - BLUE, 4b-time.B (Actual Time 16:28:40 +449857)

QPA Faults none, blue & yellow off including blue tq's

QD Alarms no FEC/DSP

Postmortems n/a

Qdplots n/a

Quench Status non-magnet quench

Reason work being done on the Main Power Supply System

Summary, 10/24/01 QLI - Yellow, 6b-ps1 (Actual Time 18:44:12 +1760921)

QPA Faults none

QD Alarms no negative Tq's

Postmortems n/a

Qdplots n/a

Quench Status NOT REAL

Reason unexplained trip, looking into a possible loose K-Lock connection.

22:11:03 Nick is speaking with Don Bruno about turning on **bi9-tq4**. The instructions did not mention if the tqOn procedure can be used at flattop. Alas, it can. [jak](#)

23:04:30 The **yi3-tq6** supply tripped to standby-error. The QPA indicated an overcurrent. Nick is bringing it on. [jak](#)

#### **THURSDAY: 10/25/01**

00:47:52 **yi3-tq6** has tripped two more times on a quench indication. There we see no effect on the beam so we're leaving it off.

Summary, 10/25/01 QLI - BLUE, 8b-ps1 (Actual Time 08:10:28 +1073929)

QPA Faults none

QD Alarms no negative Tq's

Postmortems nothing unusual, thought bo7-qf8-ps had a high noise on the voltage, but it was normal

Qdplots indicated the link went down first before T=zero. This is a normal condition, ask George.

Quench Status non-magnet, operator error

Reason Someone reset the 8b-ps1 PLC.

09:34:46 comment by...Johannes & Al -- **bo11-qd1-ps** has a problem, the iref is ok, the current has spikes, meaning the actual current is fluctuating by 10 Amps

Summary, 10/25/01 Beam Abort 6b-ps1, QLI - YELLOW 6b-ps1 (Actual Time 16:39:08 +2268516)

QPA Faults none

QD Alarms no negative Tq's

Postmortems nothing unusual

Qdplots

Quench Status NOT REAL

Reason unexplained trip, looking into a possible loose K-Lock connection.

16:44:16 comment by...CM -- Yellow beam loss was caused by **yi3-qgt-ps** that did not ramp, but jumped (black line). The red line shows how its current should look like. yi3-qgt-ps had shown up on the alarm screen as "wfg not started", but disappeared after I restarted its wfg before the ramp. (**Operator Error – they never ramped it**)

Summary, 10/25/01 Beam Abort 6b-ps1, QLI - YELLOW 6b-ps1 (Actual Time 19:19:56 +3124880)

QPA Faults none

QD Alarms no negative Tq's

Postmortems nothing unusual

Qdplots

Quench Status NOT REAL

Reason unexplained trip, looking into a possible loose K-Lock connection.



19:20:03 Yellow quench link interlock originating from 6b-ps1, while sitting at injection. No quench detectors tripped before the link was pulled, no QPA faults were reported, and the post mortem plots and psall did not indicate any power supply problems. (comment by...jak -- This QLI looks similar to the one that occurred yesterday at 1844.)

Summary, 10/25/01 Beam Abort 6b-ps1, QLI - YELLOW 6b-ps1 (Actual Time 19:44:08 +3603406)

QPA Faults none

QD Alarms no negative Tq's

Postmortems nothing unusual

Qdplots

Quench Status NOT REAL

Reason unexplained trip, looking into a possible loose K-Lock connection.

19:54:34 A yellow quench link interlock has occurred again, originating from 6b-ps1. The RHIC had been sitting at injection for three minutes since the recovery of the last QLI. No quench detectors tripped before the link was pulled, no QPA faults were reported, and the post mortem plots and psall did not indicate any power supply problems. George Ganetis was contacted and is investigating from home.

Summary, 10/25/01 Beam Abort 6b-ps1, QLI - YELLOW 6b-ps1 (Actual Time 22:42:00 +2141642)

QPA Faults none

QD Alarms no negative Tq's

Postmortems nothing unusual

Qdplots

Quench Status NOT REAL

Reason G. Ganetis and D. Oldham are in to investigate a possible **bad k-lock connector**. George performed a binary search to find the problem with the yellow quench link at 1006B. The 1006B building has been investigated for possible temperature fluctuations or human activity. Nothing unusual was found. They performed various tests to search for possible loose connectors or faulty equipment in 1006B. They did not replace any parts, however the 6b-ps1 link appears to be stable. The yellow link is being brought up. C. Schultheiss was contacted at G. Ganetis' request.

## **Friday**

Summary, 10/26/01, QLI - YELLOW 6b-ps1 (Actual Time 00:25:44 +719972)

QPA Faults none

QD Alarms none (RUNNING)

Postmortems

Qdplots

Quench Status NOT REAL

Reason undetermined, **K-Lock connection**, G. Ganetis has set up instrumentation in 1006B to capture data in the event of a yellow QLI. He has requested that no one reset the scope

Summary, 10/26/01 Beam Abort 10a-ps3.A, QLI - BLUE 10a-ps3.A (Actual Time 01:28:36 +3608515)

QPA Faults bi9-qf1-qp (FAN)

QD Alarms none (RUNNING)

Postmortems show WED, Dec 31, 19:00:00 (NOT REAL PLOTS)

Qdplots

Quench Status

Reason Fan switches may have slight obstruction or became resistive at their contact points (MCR was able to cycle to reset – problem not looked into, may fail at another date).

10:40:32 Quench Link Interlock in Yellow ring, 6b-ps1 dropped first.

NOTE: W. Louie has located the problem with the Yellow link turns out to be a bad soldered K-Lock connector that was not assembled properly causing 6b yellow QLI's and fixed it.

11:00 D. Bruno reports the following: **bi9-tq4 and bi4-tv6 power supplies have been replaced. IGBT card for yi3-tq6 QPA has been replaced.**

Summary, 10/26/01 Beam Abort , QLI-Yellow ring, 4b-time.B (Actual Time 16:26:52 +632782)

QPA Faults none

QD Alarms no negative Tq's

Postmortems show yellow main dipole glitch

DX Heaters not fired

Qdplots N/A

Quench Status NOT REAL

Reason tripped out on "OUTCUR 2" fault (The RHIC ramp went well this time. However, Yellow quenched during coggling. D. Bruno and C. Schulties are investigating.)

Summary, 10/26/01 AQLI- Blue 4b-time. (Actual Time 17:22:12 +1100863)

QPA Faults b4-dhx-qp CROW

QD Alarms no negative Tq's, Aux quench at 10:07:33 B9TQ6\_VT appears (rack was shut down for p.s. work)

Postmortems show oscillation on Blue main dipole p.s.

DX Heaters not fired

Qdplots N/A

Quench Status NOT REAL

Reason Carl workin on the system.

2030: Cryo reports a PLC fault in rack 7Q6. Aborting beam and turning off RHIC critical devices. Turning off 7 o'clock power supplies.

### Saturday

**04:58:12-** Beam Abort, 12a-ps1.B dropped {Cryo Lead Flow} Cryo permit input has dropped, beam aborted. STAR systems down. The second store was aborted when the cryo input to the permit link was pulled. Cryo control room reports that all their equipment tripped during a possible power dip. STAR systems also went offline at the same time. As of the end of the shift the rings are at park and we await word from cryo that they have recovered.

Summary, 10/27/01 Beam Abort, QLI-Blue ring, 4b-time.A (Actual Time 11:34:08 +2577079)

QPA Faults none

QD Alarms (4b-qd1) B4QDQ9\_VT Tq-23

Postmortems show ramping of p.s.

DX Heaters not fired

Qdplots (PIC)

Quench Status NOT REAL

Reason found a **voltage tap crimped on the insulation** at the 4O'clock valve box

**15:54:45** comment by...dejan -- The **yellow yo9-gmt gammat- quad got bad wfg request and did not work the right way**. Al Marusic pointed out before that this 9c-ps is in the area where there might had been radiation damaged. **19:51:37-** Made an AC reset to 9c-ps2 to clear possible memory corruptions in wfg of o9-qgt.[Wolfram](#)

Summary, 10/27/01 Beam Abort, 10a-ps3.A QLI-Blue ring, 11b-ps1 (Actual Time 18:37:12 +2148055)

QPA Faults b12-dhx-qp CROW

QD Alarms (11b-qd1) B10DSA5\_A4VT Tq-24

Postmortems (see PIC) bo11-qf2-ps

DX Heaters not fired

Qdplots indicate above Vtap did go negative before T=0 compared to others in the area.

Quench Status **REAL QUENCH**

Reason REAL QUENCH PAGE indicates the following (4) magnets quenched: (10a-qd1) B10QFQ4\_6VT, (11b-qd1) B10DSA5\_A4VT and (12a-qd1) B11QFQ3\_VT & B11QFQ2\_VT

## Sunday

0600: Blue lead flow permit link pulled at 6b. Cryo control room is investigating. Ramping down to park. 0630: CCR reports that they need to access the ring to investigate a PLC problem. Turning off critical devices.

0855: Cryo has completed their Ring Access; CCR reports that 2 CPU Cards for sensing ring temperatures were replaced

0910: CCR reports they are still having problems

1010: **Small Power Dip**; Linac Mod 5 pulsing tripped off; BTA QV7 circuit breaker tripped and was reset; Phenix main magnet power supply; AtR power supplies uq3, wq4, wq5, wq6, xq1, xq4 xq6, xp1, yq1-6 and yp1 tripped off, but were turned back on; **Blue Ring power supplies bi4-th7 & bi1-th15 tripped off, but were turned back on**

Summary, 10/28/01 Beam Abort, QLI-Blue ring, 6b-ps1 (Actual Time 15:08:44 +902151)

QPA Faults b6-dhx-qp CROW

QD Alarms (6b-qd1) B5QDQ8\_GL Tq-21

Postmortems nothing unusual

DX Heaters not fired

Qdplots

Quench Status NOT REAL

Reason **Gas cooled lead valve** was in the manual position instead of automatic

Summary, 10/28/01 Beam Abort, QLI- Blue ring, 4b-time.B (Actual Time 21:50:28 +3319227)

QPA Faults b4-dhx-qp CROW

QD Alarms no negative Tq's

Postmortems indicated Blue Main Quad Vtap dropping 3 sec prior to T=0

DX Heaters not fired

Qdplots N/A

Quench Status NOT REAL

Reason Blue Main Quad p.s. voltage dropping, Carl to investigate.

Summary, 10/28/01 Beam Abort QLI- Blue ring, 12a-ps1.A (Actual Time 22:11:36 +1576461)

QPA Faults none

QD Alarms no alarms (RUNNING)

Postmortems all near zero current, b12-q7-ps Iref & current spike -2.7 sec before T=0, did not trip link.

DX Heaters not fired

Qdplots N/A

Quench Status NOT REAL

Reason Blue main quad and dipole were at park and another QLI came in from 12a-ps1. W. Louie is looking at the quench data from home and points out that it was the quad that went first - the voltage starts dropping 3 sec before the QLI. 22:50:37 comment by...trav -- Scratch that, Wing says that there is a problem with the phase for the flat current in the blue main dipole. C. Schultheiss is looking 2310: Wing has **cycled the AC power to bi12-q6; it had tripped on an error-fault** after the last QLI. It appears to be working properly now. 2320: Carl has given us the machine for recovery. He points out that the current ramp has steps in the reference for the main magnets; he believes that these steps, coupled with the noise that can be seen from the Booster MMPS pulsing, may be causing the problems on the down ramp. For the night he asks that we shut off pulsing on the BMMPs during the down ramp.